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10/699,700	11/04/2003	Masahiro Ozawa	011350-324	5850

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KRASNIC, BERNARD

ART UNIT	PAPER NUMBER
2624	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/699,700	OZAWA, MASAHIRO
	Examiner	Art Unit	
	Bernard Krasnic	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 February 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-39</u> is/are pending in the application.

    4a) Of the above claim(s) <u>18-39</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12-31-2003</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   The Election/Restriction filed 2/28/2007 have been entered and made of record.

The Applicant has elected with traverse claims 1-17 (I).

2.   The Applicant has withdrawn claims 18-39 of group II.

3.   The Applicants traversal arguments toward the restriction of claims 18-39 of

group II are not persuasive. Therefore the Examiner has maintained the restriction on

groups I and II because Figures 13 and 15 clearly depict two different species which do

not overlap in scope, they are mutually exclusive, and have materially different designs

and modes of operation as discussed in the Examiners Official Action dated February 6,

2007.

Specification

4.   Applicant is reminded of the proper language and format for an abstract of the
disclosure.
    The abstract should be in narrative form and generally limited to a single paragraph on a separate
sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length
since the space provided for the abstract on the computer tape used by the printer is limited. The form
and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The
abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need
for consulting the full patent text for details.

    The language should be clear and concise and should not repeat information given in the title. It
should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure
defined by this invention," "The disclosure describes," etc.

5.   The abstract of the disclosure is objected to because it is not within the range of

50 to 150 words. The intent of the abstract is to give a concise but brief statement of

the disclosure or the invention as a whole consisting of a series of complete sentences

forming a single paragraph on a separate sheet within the range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

6.   The disclosure is objected to because of the following informalities:

Page 1, line 7: The title -- CROSS REFERENCE TO RELATED APPLICATIONS --

should be inserted.

Appropriate correction is required.

Claim Objections

7.   Claims 2-6, 8-11, and 13-16 are objected to because of the following

informalities:

Claims 2, 4, 8 and 10, line 12, claims 13 and 15, line 13 respectively: "which exhibits the

highest" should be -- which exhibits a highest --.

Claims 3 and 9, line 12, claim 14, line 13 respectively: "which exhibits the least" should

be -- which exhibits a least --.

Claims 5 and 11, lines 13 and 21, claim 16, line 14 and 22 respectively: "which exhibits

the highest" should be -- which exhibits a highest --.

Claims 5 and 11, line 17, claim 16, line 18 respectively: "which exhibits the least" should

be -- which exhibits a least --.

Claim 6, lines 2, 3, 5, and 7 respectively: "a object" should be -- an object --.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

8.   Claims 12-17 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claims 12-17 are drawn to functional

descriptive material NOT claimed as residing on a computer readable medium.   MPEP

2106.IV.B.1(a) (Functional Descriptive Material) states:

> "Data structures not claimed as embodied in a computer-readable medium are descriptive
> material per se and are not statutory because they are not capable of causing functional change in the
> computer."
>
> "Such claimed data structures do not define any structural or functional interrelationships between
> the data structure and other claimed aspects of the invention which permit the data structure's
> functionality to be realized."

Claims 12-17, while defining "image processing program", does not define a

"computer-readable medium" and is thus non-statutory for that reasons. An "image

processing program" can range from paper on which the program is written, to a

program simply contemplated and memorized by a person. The examiner suggests

amending the claim to embody the program on "computer-readable medium" in order to

make the claim statutory. The limitation in claims 12-17 "An image processing program

for causing" should be -- A computer-readable medium encoded with computer-

readable instructions to cause --.

"In contrast, a claimed computer-readable medium encoded with the data structure defines structural and

functional interrelationships between the data structure and the computer software and hardware

components which permit the data structure's functionality to be realized, and is thus statutory." - MPEP

2106.IV.B.1(a)

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

10.   Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Re Claim 17: As discussed above, claim 16 should begin with -- A computer-readable

medium encoded with computer-readable instructions to cause -- in order to avoid the

35 U.S.C. 101 rejection and therefore this would make claim 17 indefinite because it no

longer would be a further limiting claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12.   Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gentile (US 5,949,968).

Re Claim 1: Gentile discloses an image processing device / processing apparatus for output to a visual-output device (see col. 2, lines 4-6), comprising a region extraction unit / within a processor for separating and extracting a character region / text type, a graphic region / graphic type and a photograph region / photograph type from image data / two-dimensional page representation (see Fig. 2, col. 2, lines 26-30); a region compression unit / within a processor for performing a compression process / different algorithms for compressing for each of the region data / different representation types extracted by said region extraction unit (see col. 2, lines 34-38); a region synthesis unit / within a processor for synthesizing / stored sequentially or displayed together the region data / different types compressed by said region compression unit (see col. 3, lines 32-38, the compressed data is stored sequentially by the region which is essentially synthesizing or combining the compression regions, or the compressed data after being stored sequentially is decompressed and displayed on a display to the visual-output display as shown in ref. No. 18 or 80 of Fig. 1 and Fig. 3 which is essentially synthesizing or combining the compression regions); and a compression method selection unit / within a processor for selecting a compression method / selection of compression algorithms of the compression process to be performed for each of the region data / different types extracted by said region extraction unit from among a plurality of compression methods designated individually for types / corresponding with

different representation types of the region data (see col. 2, lines 33-41, the selection of

a plurality of different compression algorithms corresponding to different representation

types and any combinations); said region compression unit / within a processor

performing the compression process / different algorithms for compressing for each of

the region data / different representation types using the compression method selected /

selection of compression algorithms for the region data / different types by said

compression method selection unit (see col. 2, lines 4-6 and 26-40, col. 1, lines 10-20).

Re Claim 5: Gentile discloses an image processing device / processing apparatus for

output to a visual-output device (see col. 2, lines 4-6), comprising a region extraction

unit / within a processor for separating and extracting a character region / text type, a

graphic region / graphic type and a photograph region / photograph type from image

data / two-dimensional page representation (see Fig. 2, col. 2, lines 26-30); a region

compression unit / within a processor for performing a compression process / different

algorithms for compressing for each of the region data / different representation types

extracted by said region extraction unit (see col. 2, lines 34-38); a region synthesis unit /

within a processor for synthesizing / stored sequentially or displayed together the region

data / different types compressed by said region compression unit (see col. 3, lines 32-

38, the compressed data is stored sequentially by the region which is essentially

synthesizing or combining the compression regions, or the compressed data after being

stored sequentially is decompressed and displayed on a display to the visual-output

display as shown in ref. No. 18 or 80 of Fig. 1 or Fig. 3 which is essentially synthesizing

or combining the compression regions); and a compression process mode setting unit /

selection of compression algorithms using compression factors for setting a speed

preference mode / computational complexity, a picture quality preference mode / visual

quality or a size preference mode / compression ratio as a compression processing

mode (see col. 2, lines 33-41, the selection of a plurality of different compression

algorithms corresponding to different representation types with combinations are based

on balancing the compression factors of compression ratio or size, computational

complexity or speed and visual quality or picture quality); said region compression unit /

within a processor using, when the speed preference mode is set / compression

algorithms based on computation complexity factor by said compression process mode

setting unit, one of a plurality of compression methods designated for each of the region

data / different types which exhibits the highest processing speed / low compression

complexity to perform the compression process for the individual region data (see col. 2,

lines 33-41, col. 3, lines 5-10, when the selection of compression algorithms for the

different representation types and their combinations is based on computational

complexity, a low computational complexity results in high processing speed while a

high computational complexity results in low processing speed), said region

compression unit / within a processor using, when the picture quality preference mode

is set / compression algorithms based on visual quality by said compression process

mode setting unit, one of a plurality of compression methods designated for each of the

region data / different types which exhibits the least picture quality deterioration / best

visual quality to perform the compression process for the individual region data (see col.

2, lines 33-41, col. 3, lines 5-10, when the selection of compression algorithms for the

different representation types and their combinations is based on visual quality, a best

visual quality results in the least picture quality deterioration, a worst visual quality

results in the highest picture quality deterioration), and said region compression unit /

within a processor using, when the size preference mode is set / compression

algorithms based on the compression ratio factor by said compression process mode

setting unit, one of a plurality of compression methods designated for each of the region

data / different types which exhibits the highest compression ratio / highest compression

ratio to perform the compression process for the individual region data (see col. 2, lines

33-41, col. 3, lines 5-10, when the selection of compression algorithms for the different

representation types and their combinations is based on compression ratio, the highest

compression ratio results in a small data size, the least compression ratio results in a

large data size).

Re Claim 6: Gentile discloses an image processing device / processing apparatus for

output to a visual-output device (see col. 2, lines 4-6), comprising an object extraction

unit / within a processor for interpreting a document file / page representation described

in a page description language / text, graphic and photograph or any combination, and

extracting an object / text, graphic and photograph or any combination which is a

component of the document file / page representation (see Fig. 2, col. 2, lines 26-30),

an object compression unit / within a processor for performing a compression process /

different algorithms for compressing for each of the object data / different representation

types extracted by said object extraction unit (see col. 2, lines 34-38); a object synthesis

unit / within a processor for synthesizing / stored sequentially or displayed together the

object data / different types compressed by said object compression unit (see col. 3,

lines 32-38, the compressed data is stored sequentially by the type which is essentially

synthesizing or combining the compressed object data, or the compressed data after

being stored sequentially is decompressed and displayed on a display to the visual-

output display as shown in ref. No. 18 or 80 of Fig. 1 or Fig. 3 which is essentially

synthesizing or combining the compressed object data); and a compression method

selection unit / within a processor for selecting a compression method / selection of

compression algorithms of the compression process to be performed for each of the

object data / different types extracted by said object extraction unit from among a

plurality of compression methods designated individually for types / corresponding with

different representation types of the object data (see col. 2, lines 33-41, the selection of

a plurality of different compression algorithms corresponding to different representation

types with combinations); said object compression unit / within a processor performing

the compression process / different algorithms for compressing for each of the object

data / different representation types using the compression method selected / selection

of compression algorithms for the object data / different types by said compression

method selection unit (see col. 2, lines 4-6 and 26-40, col. 1, lines 10-20).

As to claims 2-4, the discussions are addressed with respect to claim 5.

As to claims 7-11, the claims are the corresponding method claims to claims 1-5 respectively. The discussions are addressed with regard to claims 1-5.

As to claims 12-16, the claims are the corresponding image processing program claims to claims 1-5 respectively. The discussions are addressed with regard to claims 1-5.

As to claim 17, the claim is the corresponding computer-readable medium claim to claim 5 respectively. The discussions are addressed with regard to claim 5.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shirasaki et al discloses a method and apparatus for character recognition; Tanaka et al discloses an image processing method and device; Revankar et al discloses an image segmentation system; Fan discloses an image type classification using edge features; Fan et al discloses a background-based image segmentation; Tyler et al discloses a method and apparatus for reducing storage requirements for display data; Willis et al discloses image enhancement system; Lopresti discloses a storage management system for document image database; Kojima discloses an image data compressing method and restoring method; Gentile discloses a method an apparatus for processing for a visual-output device with reduced buffer memory requirements; Fan discloses a systems and methods for reducing boundary artifacts in hybrid compression; Clouthier discloses fast page analyzer for proper selection of compression engine for rendered data.
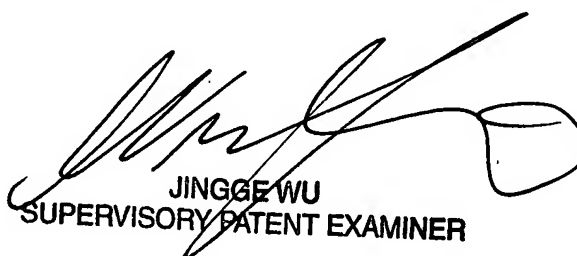
14.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 9:00am-3:00pm and every other Friday 9:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
April 3, 2007

JINGGE WU
SUPERVISORY PATENT EXAMINER